

Date: Wednesday, 9/6/2006 3:44:32 PM
 User: Kim Johnston

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : PROP ASSEMBLY
 Job Number : 28436
 Estimate Number : 11558
 P.O. Number :
 This Issue : 9/6/2006 S.O. No. :
 Prsht Rev. : NC Part Number : D3085041
 First Issue : / / Type : SMALL /MED FAB Drawing Number : D3085 REV A1
 Previous Run : 26759 Drawing Revision : A1
 Material :
 Due Date : 9/13/2006 Qty: 1 Um: Each
 Written By :
 Checked & Approved By :
 Comment : Est. B020305 Added dwg Rev.A1 NG

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 D30153 Lock Nut



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Lock Nut

Pick:

Qty Part Number Description Batch

1 D3015-3 Locknut 41890

2.0 D30811 Hinge



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Hinge

Pick:

Qty Part Number Description Batch

1 D3081-1 Prop Hinge 26790

3.0 D30821 Clip



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Clip

Pick:

Qty Part Number Description Batch

1 D3082-1 Clip 112032 107609

4.0 D30841 Strut



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Strut

Pick:

Qty Part Number Description Batch

1 D3084-1 Prop arm 26792

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
08.10.29	3	USE #1-B Adjustable Clip (Arthur Platt Company) INSTEAD OF D3082-1 clip. REF DS EMAIL BIN: 107659				CP 08.10.29 PC DS 042	S 08.10.29	
08.10.29	6/7	USE AN960JD10L INSTEAD OF AN960JD10 BIN 105793 USE AN960JD10LL INSTEAD OF AN960JD10L BIN 19606 TO ENSURE 1 1/2 THREADS IN SAFETY REF DS EMAIL				CP 08.10.29 PC DS 042		

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 9/6/2006 3:44:32 PM
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Drawing Name: PROP ASSEMBLY

Job Number: 28436

Part Number: D3085041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

AN45A

Bolt



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Bolt

Pick:

Qty Part Number Description Batch

1 AN4-5A

Bolt

M106605

6.0

AN960JD10

Washer



Comment: Qty.: 3.0000 Each(s)/Unit Total: 12.0000 Each(s)

Washer

Pick:

Qty Part Number Description Batch

3 AN960JD10L

Washer

M105793
M109059

7.0

AN960JD10LL

Washer



Comment: Qty.: 3.0000 Each(s)/Unit Total: 12.0000 Each(s)

Washer

Pick:

Qty Part Number Description Batch

3 AN960JD10LL

Washer

19600
105793

8.0

AN960JD416

Washer



Comment: Qty.: 2.0000 Each(s)/Unit Total: 8.0000 Each(s)

Washer

Pick:

Qty Part Number Description Batch

2 AN960JD416

Washer

108827

9.0

AN960JD516L

Washer



Comment: Qty.: 1.0000 Each(s)/Unit Total: 4.0000 Each(s)

Washer

Pick:

Qty Part Number Description Batch

1 AN960JD516L

Washer

M14477

AN 960 JD 10LL
M 19600
(3)

PC 9/6/27 (1)

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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NOTE: Date & initial all entries

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Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: PROP ASSEMBLY

Job Number: 28436

Part Number: D3085041

Job Number:



Seq. #:

Machine Or Operation:

Description :

10.0

MS21042L3

Nut



Comment: Qty.: 3.0000 Each(s)/Unit Total : 12.0000 Each(s)

Nut

Pick:

✓

Qty	Part Number	Description	Batch
3	MS21042L3	Nut(or MS21042-3)	M09091

[Signature]

11.0

MS21042L4

Nut



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Nut

Pick:

✓

Qty	Part Number	Description	Batch
1	MS21042L4	Nut(or MS21042-4)	108145

[Signature]

12.0

MS27039113

Screw



Comment: Qty.: 3.0000 Each(s)/Unit Total : 12.0000 Each(s)

Screw

Pick:

✓

Qty	Part Number	Description	Batch
3	MS27039-1-13	Screw	M15211

[Signature]

13.0

SL69BS

Ball Stud



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

Ball Stud

Pick:

✓

Qty	Part Number	Description	Batch
1	SL69-BS	Ball Stud	M109239

[Signature] 08/10/28 ①

14.0

SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble as per dwg D3085

FF 08/10/28

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SFS 08/10/28 ①

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Wednesday, 9/6/2006 3:44:33 PM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: PROP ASSEMBLY

Job Number: 28436

Part Number: D3085041

Job Number:



Seq. #:

Machine Or Operation:

Description :

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

Composites
D380-589-011

u

17.0

QC21

FINAL INSPECTION/W/O RELEASE



①

Comment: FINAL INSPECTION/W/O RELEASE

D 08/10/29

Job Completion



u 08.10.29

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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NOTE: Date & initial all entries

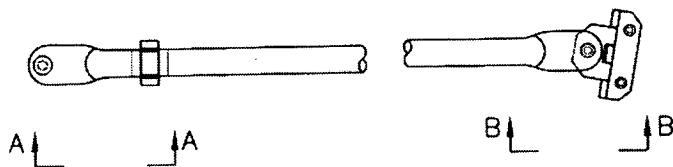
DART



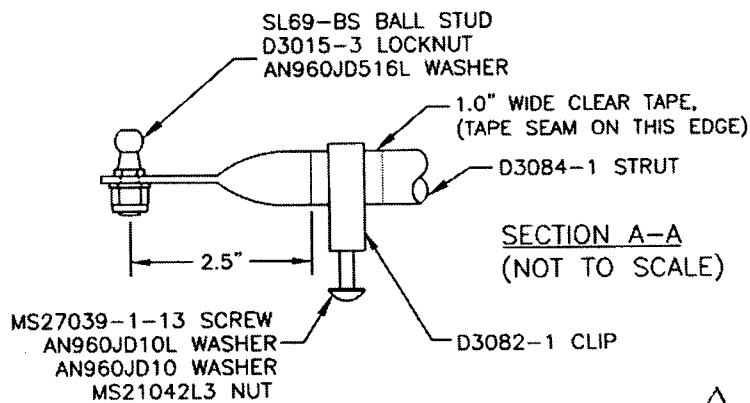
RELEASED
02.01.25

DESIGN	DRAWN BY	DART AEROSPACE LTD
CP	CP	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
#	#	D3085
DATE	TITLE	REV. A
02.01.23	PROP ARM ASSEMBLY	SHEET 1 OF 1
A	02.01.23	NEW ISSUE
A1	02.02.25	AN4-SA WMS AN4-4A
		SCALE 1:5

REFERENCE ONLY

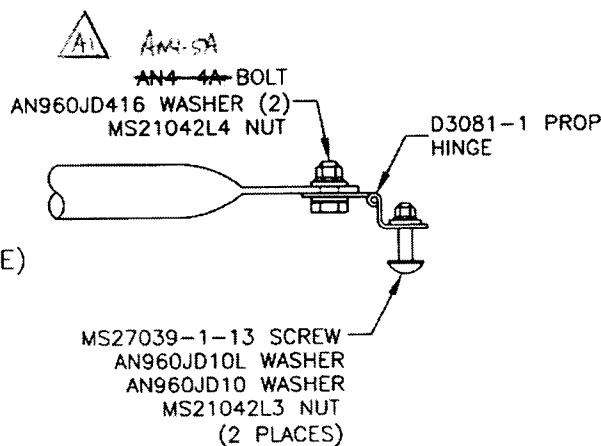


D3085-041 PROP ARM ASSEMBLY



qch 86 #

SECTION B-B
(NOT TO SCALE)



Chris Provencal

From: dshepherd@dartaero.com
Sent: October 28, 2008 10:13 PM
To: Chris Provencal
Subject: Re: NCR D3082-1

I agree that the stainless steel clip from mcmaster is an acceptable deviation as long as we do a fit check to ensure that it fits and functions properly.

David

Sent from my BlackBerry device on the Rogers Wireless Network

From: "Chris Provencal" <cprovencal@dartaero.com>
Date: Tue, 28 Oct 2008 09:44:44 -0400
To: 'David Shepherd' <dshepherd@dartaero.com>
CC: 'Mike Petsche' <mpetsche@dartaero.com>; Linda Lacelle \ (Linda Lacelle) <lindal@dartaero.com>
Subject: FW: NCR D3082-1

David,

Linda needs to ship a D350-589-041, we need to substitute the clip. I left a phone message regarding this yesterday, this is the original email with some attachments.

-Chris

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: April 8, 2008 9:30 AM
To: 'David Shepherd'
Cc: 'Mike Petsche'
Subject: NCR D3082-1

David,

Our supplier of the D3082-1 Clips has proven unreliable (Canadian Tire) which perhaps explains why Boeing didn't use Canadian Tire for the new 787. Anyhow, we have none in stock and Linda searched high and low for another source. We found these (pics), which are #1-B Adjustable Clips from the Arthur L Platt Company in Milford CT (through McMaster). They are nickel plated steel, the width is in dwg tol (0.440"). The mat'l thickness is over dwg dim at 1/32" (0.025 is ref anyway). The hole is made to thread with a #10 screw, it will have to be opened to 0.203" diam. The only issue I see with these (ref pic IMG 1065) is that the base is curved (RH pic), we can flatten them but the end result is a bit wavy (LH pic) but not overly so. These have been replaced with the gas strut, so I don't think we'll need too many of these. I think they're acceptable. I think we can sign these off as acceptable with no dwg update.

Additionally they have a SS version and a Nylon-coated steel version. If we were to use the Nylon one (IMG 1067.jpg) we could avoid powder coating them; Linda is keen on that one. The coating seems fairly durable and looks/feels like powder coat. If you're OK with that one, we could sign it off as a deviation on the finish, and look at updating the dwg whenever.

-Chris

2008-10-29

Chris Provencal

From: David Shepherd [dshepherd@dartaero.com]
Sent: October 29, 2008 12:20 PM
To: 'Chris Provencal'
Cc: 'Mike Petsche'
Subject: RE: NCR D350-589-041

Chris,

Looks good to me. Thanks for the video. Acceptable deviation. No DSI required.

David

From: Chris Provencal [mailto:cprovencal@dartaero.com]
Sent: Wednesday, October 29, 2008 7:48 AM
To: 'David Shepherd'
Cc: 'Mike Petsche'
Subject: NCR D350-589-041

David,

Regarding the D360-589-041 door, the bolt on the clip and hinge were not showing enough threads. I had them substitute the exterior washers for AN960JD10L (was JD10) washers and the inner washers for AN960JD10LL (was JD10L) washers. I tried avoiding changing the bolt length, to keep the change is minor as possible to avoid the necessity of a DSI. The IIN and ICA refer to the parts as (ref) for replacement purposes.

The new clip is shown in the video file.

-Chris

No virus found in this incoming message.

Checked by AVG.

Version: 7.5.549 / Virus Database: 270.8.3/1746 - Release Date: 10/25/2008 5:55 PM

No virus found in this outgoing message.

Checked by AVG.

Version: 7.5.549 / Virus Database: 270.8.4/1754 - Release Date: 10/29/2008 7:45 AM